Remarks

The Office Action mailed 18 June 2007 has been received and reviewed. Claim 1 having been amended, claims 27-53, 56-59, 61-70, and 72-73 having been cancelled, without prejudice, and claims 74-76 having been added, the pending claims are claims 1-26, 54, 55, 60, 71, and 74-76. Reconsideration and withdrawal of the rejections are respectfully requested.

The new and amended claims are fully supported by the specification, for example, at page 9, line 28 through page 10, line 2, and at page 13, line 26 through page 17, line 7. No new matter has been added.

Obviousness-Type Double Patenting Rejections

Claims 1-26, 54, 55, 60, and 71 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10, 12-51, 53-55, 58-93; 1-34; and 1-44 of copending Application Nos. 10/728,439; 10/387,236; and 10/728,446.

Claims 1-26, 54, 55, 60, and 71 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 10/729,114 in view of Asmus (U.S. Patent No. 5,270,358).

Upon an indication of otherwise allowable subject matter and in the event these rejections are maintained, Applicants will provide an appropriate response.

The 35 U.S.C. §102/103 Rejection

The Examiner rejected claims 1-26, 54, 55, 60, and 71 under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over Asmus (U.S. Patent No. 5,270,358). This rejection is respectfully traversed.

Asmus discloses "silver oxide, and silver and its salts" generically as examples of a "wide variety of [antimicrobial] agents" (see, e.g., column 12, lines 27-28). There is no disclosure of copper compounds or zinc compounds in the list of antimicrobial agents in column 12, lines 27-

44, of Asmus. Applicants' claims recite that the bioactive agent is selected from the group consisting of a silver compound, a copper compound, a zinc compound, and combinations thereof, wherein the silver compound has a solubility in water of at least 0.1 gram per liter.

Not all silver compounds have a solubility in water of at least 0.1 gram per liter. The Examiner's attention is directed to the CRC Handbook of Chemistry and Physics, 64th Edition, page B-137, previously submitted in the Information Disclosure Statement mailed May 11, 2007, and submitted herewith again as Exhibit A for the Examiner's convenience. For example, silver oxide has a solubility of 0.0013 gram per 100 mL cold water (or 0.013 gram per liter) and 0.0053 gram per 100 mL hot water (or 0.053 gram per liter). Although silver sulfate does have a solubility of at least 0.1 gram per liter, silver stearate does not (0.006 gram per 100 mL or 0.06 gram per liter). Silver halide salts are either insoluble or only slightly soluble in water and "undesirable [for use in the present invention] because they are too insoluble" (see, e.g., Applicants' specification at page 9, lines 12-13.

"[I]t is not uncommon that a 'species' may be patentable, that is, satisfy sections 101-103, notwithstanding a prior art 'genus' " (e.g., In *re Ornitz*, 376 F.2d 330, 336, 153 USPQ 453, 458 (CCPA, 1967). Furthermore, "a prior genus which does not explicitly disclose a species does not anticipate a later claim to that species" (e.g., D. Chisum, Chisum on Patents, Volume 1, Release No. 94, §3.02[2][b] page 3, line 9 to page 4, line 2).

Asmus discloses a genus of silver compounds, in addition to numerous other antimicrobial agents, and Applicants' claims recite a species of silver compounds (i.e., those having a solubility in water of at least 0.1 gram per liter). As such, Applicants respectfully submit that Asmus does not specifically exemplify or provide an enabling disclosure of the presently claimed species, i.e., a polymer composition comprising . . . a bioactive agent selected from the group consisting of a silver compound, a copper compound, a zinc compound, and combinations thereof, wherein the silver compound has a solubility in water of at least 0.1 gram per liter . . . and microparticles . . . wherein at least a portion of the bioactive agent is incorporated within the microparticles. Thus, Asmus does not anticipate present claims 1-26, 54,

55, 60, and 71.

Furthermore, there is no teaching or suggestion to one of skill in the art that would guide them to select such bioactive agents (particularly, a silver compound having a solubility in water of at least 0.1 gram per liter) from the "wide variety of [antimicrobial] agents" disclosed by Asmus. There is no teaching or suggestion to one of skill in the art that would guide them to select such bioactive agents and combine them with the other components in a manner to produce a polymer mixture (comprising the organic polymer matrix and the microparticles comprising an amine-containing organic polymer), wherein at least a portion of the bioactive agent is incorporated within the microparticles. Also, there is no teaching or suggestion that the techniques used to make the composition of Asmus would result necessarily in incorporating at least a portion of the bioactive agent, regardless of what it is, within microparticles.

It is respectfully submitted that "[i]n making an obviousness determination, Office personnel should consider the number of variables which must be selected or modified, and the nature and significance of the differences between the prior art and the claimed invention" (M.P.E.P. 2144.08(4)(c)). Applicants request the Examiner to point to the blaze marks in the cited document, either explicit or implicit, or anywhere in the general knowledge of one of skill in the art, that would lead one of skill in the art down a path to select an organic polymer matrix; an inverse emulsion comprising absorbent hydrophilic microparticles, wherein the microparticles when in a substantially nonhydrated form have an average particle size of 10 microns or less, and wherein the microparticles comprise an amine-containing organic polymer selected from the group consisting of a poly(quaternary amine), a polylactam, a polyamide, and combinations thereof; a bioactive agent selected from the group consisting of a silver compound, a copper compound, a zinc compound, and combinations thereof, wherein the silver compound has a solubility in water of at least 0.1 gram per liter; and an optional foaming agent; wherein the components are combined in a manner to produce a polymer mixture comprising the organic polymer matrix and the microparticles comprising an amine-containing organic polymer, wherein at least a portion of the bioactive agent is incorporated within the microparticles.

Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b), or in the alternative, under 35 U.S.C. §103(a).

The 35 U.S.C. §103 Rejection

The Examiner rejected claims 1-17, 20-23, 54, and 55 under 35 U.S.C. §103(a) as being unpatentable over Lorenzi et al. (U.S. Patent No. 6,217,889). This rejection is respectfully traversed.

Lorenzi et al. disclose a water insoluble substrate comprising a creped nonwoven layer and a cleansing component, including a lathering surfactant, disposed adjacent to said creped nonwoven layer. Although the nonwoven includes a synthetic polymer, the lathering surfactant is not in the form of microparticles. Although Lorenzi et al. do disclose a polymeric gelling agent in the form of particles (column 35, lines 21-23) and silver nitrate as an anti-viral agent (column 31, lines 63-64), there is no teaching or suggestion that the silver nitrate is incorporated within the gelling agent particles. Also, there is no teaching or suggestion that the techniques used to make the article of Lorenzi et al. would result necessarily in incorporating at least a portion of anti-viral bioactive agent within the gelling agent particles.

In essence, the Lorenzi et al. "personal care article suitable for cleansing" (see, e.g., Abstract) is a coated nonwoven. It is not a polymer mixture comprising the organic polymer matrix and microparticles comprising an amine-containing organic polymer. Thus, the Lorenzi et al. personal care article is very different from the polymer composition formed by a method that involves combining an organic polymer matrix, an inverse emulsion comprising absorbent hydrophilic microparticles comprising an amine-containing organic polymer, a bioactive agent, and an optional foaming agent in a manner to produce a polymer mixture comprising the organic polymer matrix and the microparticles comprising an amine-containing organic polymer, wherein at least a portion of the bioactive agent is incorporated within the microparticles.

Applicants respectfully request reconsideration and withdrawal of the rejection under 35

U.S.C. §103(a).

New Independent Claim 74

There is no teaching or suggestion in the cited art of a polymer composition preparable by a method comprising combining components comprising: an organic polymer matrix; an inverse emulsion comprising absorbent hydrophilic microparticles, wherein the microparticles when in a substantially nonhydrated form have an average particle size of 10 microns or less, and wherein the microparticles comprise a poly(quaternary amine)-containing organic polymer; a bioactive agent selected from the group consisting of a silver compound, a copper compound, a zinc compound, and combinations thereof, wherein the silver compound has a solubility in water of at least 0.1 gram per liter; and an optional foaming agent; wherein the components are combined in a manner to produce a polymer mixture comprising the organic polymer matrix and the microparticles comprising a poly(quaternary amine)-containing organic polymer, wherein at least a portion of the bioactive agent is incorporated within the microparticles. Allowance of this claim is respectfully requested.

Summary

It is respectfully submitted that the pending claims 1-26, 54, 55, 60, 71, and 74-76 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted
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Sept 7, 2007
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CERTIFICATE UNDER 37 CFR §1.8:
The undersigned hereby certifies that the Transmittal Letter and the paper(s), as described hereinabove, are being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to **Mail Stop Amendment**, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 7th day of September, 2007, at 2:29 p.m. (Central Time).

By:
Name:

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A Ready-Reference Book of Chemical and Physical Data

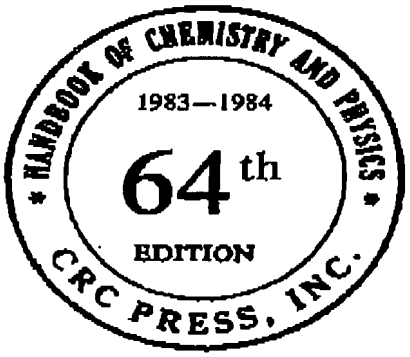

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EXHIBIT A

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PHYSICAL CONSTANTS OF INORGANIC COMPOUNDS (Continued)

No.	Name	Synonyms and Formulas	Mol. wt.	Crystalline form, properties and index of refraction	Density or spec. gravity	Melting point, °C	Boiling point, °C	Solubility, in grams per 100 cc		
								Cold water	Hot water	Other solvents
	Silver									
s168	nitrite	$AgNO_2$	153.88	wh, rhomb.	4.453[25]	d 140		0.155[0]	1.383[18]	s ac a, NH_4OH; i al
s169	nitroplatinite	$Ag_2[Pt(NO_2)_4]$	594.85	yel-brn monocl pr		d 100		sl s	s	
s170	nitroprusside	$Ag_2[Fe(NO)(CN)_5]$	481.68	lt pink				i		s NH_4OH; sl. HNO_3
s171	oxalate	$Ag_2C_2O_4$	303.76	col cr	5.029[0]	expl 140		0.00339[15]		s KCN, NH_4OH, a
s172	oxide	Ag_2O	231.74	br-blk, cub	7.143[15.5]	d 230		0.0013[25]	0.0038[100]	s a, KCN, NH_4OH, al
s173	oxide, per	Ag_2O_3 (or AgO)	247.74	gray-blk, cub	7.44	d>100		i		s H_2SO_4, HNO_3, NH_4OH
s174	palmitate	$AgC_{16}H_{31}O_2$	363.29	wh, greasy powd		209		0.0012[25]	0.006[100]	0.007[15] eth; 0.006[25] al
s175	metaphosphate	$AgPO_3$	186.64	wh, amorph	6.37	ca 482		i		s HNO_3, NH_4OH
s176	orthophosphate	Ag_3PO_4	418.58	yel, cub	6.370[25]	849		0.00065[0.5]		s a, KCN, NH_4OH, NH_3
s177	orthophosphate, mono-H	AgH_2PO_4	311.75	wh, trig	1.6035	d 110				
s178	pyrophosphate	$Ag_4P_2O_7$	605.42	wh	5.308[15.5]	585		i	i	s a, NH_4OH, KCN, ac a
s179	propionate	$AgC_3H_5O_2$	180.94	wh lf or needles	2.687[24]			0.842[25]	2.04[80]	
s180	perrhenate	$AgReO_4$	358.07	wh cr, tetrag or rhomb	7.05	410		0.32[20]		
s181	salicylate	$AgC_7H_5O_3$	244.99	wh to reddish-wh cr				sl s		s al
s182	selenate	Ag_2SeO_4	358.72	wh, orthorhomb cr	5.72			0.118[25]		
s183	selenide	Ag_2Se	294.70	thin gray pl, cub	8.0	880	d	i		s NH_4OH; h HNO_3
s184	stearate	$AgC_{18}H_{35}O_2$	391.35	wh powd, amorph		205		0.006[20]		0.006[15] al; 0.006[20] eth
s185	sulfate	Ag_2SO_4	311.80	wh, rhomb, 1.7553, 1.7748, 1.7833	5.45[25.5]	652	d 1085	0.57[0]	1.41[100]	s a, NH_4OH; i al
s186	sulfide	Nat. acanthite. Ag_2S	247.80	gray-blk, rhomb	7.328	tr 175	d		v sl s	s KCN, conc H_2SO_4, HNO_3
s187	sulfide	Nat. argentite. Ag_2S	247.80	blk, cub	7.317	825	d	2.4×10^{-14}		s KCN, a
s188	sulfite	Ag_2SO_3	293.80	wh cr		d 100		v sl s		s a, NH_4OH, KCN; i HNO_3
s189	d-tartrate	$Ag_2C_4H_4O_6$	363.81	wh, scales	3.423[0]	d		0.2[0]	0.203[25]	s a, KCN, NH_4OH
s190	orthotellurate, tetra-H	$Ag_2H_4TeO_6$	443.40	straw-yel, rhomb bipyr		d>200		i	i	s KCN, NH_4OH
s191	telluride	Nat. hessite, Ag_2Te	343.34	gray, cub	8.5	955		i	i	s KCN, NH_4OH
s192	tellurite	Ag_2TeO_3	391.38	yel-wh ppt		250-bl 450-pa yel		i	i	s KCN, NH_3
s193[1]	thioantimonite	Nat. pyrargyrite. Ag_3SbS_3	541.55	red, trig, 3.084 2.881 (Li)	5.76	486		i	i	s HNO_3
s193[2]	thioarsenite	Nat. proustite. Ag_3AsS_3	494.72	scarlet red, trig, 3.088, 2.792	5.79	490		i	i	s HNO_3
s194	thiocyanate	AgSCN	165.95	col cr		d		0.00000021[0]	0.00084[100]	s NH_4OH; i a
s195	di-thionate	$AgS_2O_6.2H_2O$	411.90	rhomb cr, ~1.602	3.51					
s196	thiosulfate	$Ag_2S_2O_3$	327.87	wh cr		d		sl s		s $Na_2S_2O_3$, NH_4OH
s197	tungstate	Ag_2WO_4	463.58	pa yel cr				0.051[0]		s KCN, NH_4OH, HNO_3
	Silver complex									
s198	diammine silver perrhenate	$[Ag(NH_3)_2]ReO_4$	392.13	col monocl cr	3.901					3.618 conc NH_4OH
s199	**Sodium**	Na	22.9898	slv, met sub, 4.22	0.97	97.81 ± 0.03	882.9	d to NaOH + Hv		d al; i eth, bz
s200	acetate	$NaC_2H_3O_2$	82.03	wh gr powd, monocl, 1.464	1.528	324		119[0]	170.15[100]	sl s al
s201	acetate trihydrate	$NaC_2H_3O_2.3H_2O$	136.08	col, monocl pr, eff, β 1.464	1.45	58	123, $-3H_2O$, 120	76.2[0]	138.3[50]	2.1[15] al; i eth
s202	alumina trisilicate	Nat. albite. $NaAlSi_3O_8$ (or $Na_2O.Al_2O_3.6SiO_2$)	262.22	col, trid, 1.525, 1.529, 1.538	2.61	1100				sl d	s HCl; d dil al
s203	metaaluminate	$NaAlO_2$	81.97	wh amorph powd, hygr, 1.566, 1.595, 1.580		1800		s	v s	i al
s204	aluminum chloride	$NaCl.AlCl_3$	191.78	wh-yelsh cr powd, hygr		185		s	s	d HCl
s205	aluminum metasilicate	Nat. jadeite. $Na_2O.Al_2O_3.4SiO_2$	404.28	col, monocl	3.3	1000–1060		i	i	d HCl